

**2nd FACT SHEET ADDENDUM FOR MODIFICATION
OF STATE WASTE DISCHARGE PERMIT
FOR DISCHARGE TO POTW ST-7374
PUGET SOUND NAVAL SHIPYARD**

(Draft for Public Notice of Draft Prepared August 23, 2006)

Puget Sound Naval Shipyard is in the process of completing construction of a new industrial wastewater pretreatment system. The US Navy has requested a modification of the existing state waste discharge permit, in order to be authorized to discharge waste water from the new sample point. The Navy plans to begin discharge from the new treatment plant in the late summer or early fall of 2006.

In addition to the request for the above modification, the Navy has requested authorization to discharge from a number of additional sample points. Some of these requests for permit modification were made prior to 2006. The Department considers a number of discharges for which requests were received in prior years to be either subject to temporary permit (permit-by-rule provisions of chapter 90.48 RCW), or to be wastewater similar in character and strength to domestic waste waters (the determination of which is authorized under WAC 173-216-050(d)). As the Department is undertaking the modification of this permit in order to authorize discharge from the new industrial wastewater treatment plant, the Department is drafting the modified permit to also include specific authorization to discharge from a number of these additional discharge points.

This permit modification also includes a change consisting of language consistent with authorizing the Permittee to use the most recent updates of accepted analytical procedures for analysis of wastewater samples.

The permit modification also includes authorization to change the location of oil detection systems located at two lift stations.

The proposed modifications are described in more detail in the table below:

SUMMARY OF CHANGES IN THE PROPOSED PERMIT MODIFICATION	
Sample Point Number	Source Description
90HM-1109-001	Industrial Wastewater Pretreatment Facility (IWPF) – Treated Effluent
The new Industrial Wastewater Pretreatment Facility (Building 1109) is proposed to receive waste water from numerous industrial sources within the Bremerton Naval Complex, which may include Puget Sound Naval Shipyard and the Intermediate Maintenance Facility. These waste waters include Metal Preparation Facility wastes, Sheet Metal Shop wastes, Pipe and Boiler Shop wastes, shipboard system chemical flush wastes, and other wastes generated from process areas that support the shipyard's function. Only the adjacent Building 873, the Plating Shop, is directly tied into Building 1109 by a short run of double-walled PVC pipelines. Waste water from all other sources is transferred to Building 1109 by means of trucking of portable tanks and containers. Waste waters accepted in the Unloading Area will be transferred to Building 1109's process tanks by means of approximately 150 feet of exterior double-walled piping.	

All waste waters transported by means of portable tanks to Building 1109 are first analyzed for waste characteristics, and evaluated for their compatibility with Building 1109 treatment processes. The waste load is transferred to Building 1109, where the treatment plant operator receives a copy of the analysis, with a statement from the Code 134 chemist regarding the appropriate method of treatment.

The following are the main sources of wastewater which will be treated in the Building 1109 Industrial Wastewater Pretreatment Facility:

Building 873 (Metal Preparation Facility): Waste waters generated in the Metal Preparation Facility, also known as the “plating shop,” comprise greater than 90 percent of the wastewaters treated at Building 1109. Wastes generated in this building are handled separately under three classifications: 1) hexavalent chromium-bearing waste water, 2) cyanide process rinse water, and 3) other acid and alkaline rinse waters. These waste streams are kept segregated in the plating shop and are separately directed to the appropriate of three wastewater retention tanks. Each tank has a dedicated short run of double-walled PVC pipeline which conducts the waste water to Building 1109.

Building 857 (Sheet Metal Shop): Waste waters originating in this building include acidic and alkaline aluminum cleaning solutions, small quantities of miscellaneous wastes containing acids and alkalies, and photo-etch solutions containing chromates. They are delivered to the IWPF by means of trucked portable tanks.

Building 107 (Pipe Shop and Boiler Shop): Waste waters generated in this building include acidic and alkaline water from metal cleaning processes. They are brought to the IWPF by means of trucked portable tanks.

Building 460: Waste water from plasma arc cutting processes is generated in this building and brought to the IWPF by means of trucked portable tanks.

Shipboard Wastes: Waste waters received from ships typically include chromate-bearing corrosion inhibitors, cleaning/flushing solutions, and corrosive wastes containing metals. These wastes are transported to Building 1109 by means of portable tanks.

Other Wastes: Additional wastes treated at the facility include shelf life-expired chemicals which are amenable to treatment in Building 1109. These wastes are transferred to Building 1109 and are placed or dissolved in the appropriate tank. Some of the shelf life-expired chemicals, such as sodium sulfite and calcium hypochlorite, are used as reagents in Building 1109 for treatment of other wastes.

Building 978 (Battery Shop): Waste water generated in the Battery Shop includes sulfuric acid solutions containing lead, which are generated from draining various types of batteries. An 11,500-gallon underground accumulation tank in an underground concrete vault is used to collect this waste water. Sometimes this waste water is hauled to Building 1109 in portable tanks. Waste water from the Battery Shop may alternatively be hauled off-site by a contractor. Occasionally this acid will be used in Building 1109 for neutralization of caustic waste waters.

Description of New Treatment Works:

The engineering report associated with construction of the new industrial wastewater pretreatment works at Building 1109 was approved by the Department on June 27, 2003. The engineering report, as approved, contained a revision (made at the request of the Department) concerning addition of fiberglass tank inserts that will be located in the sumps associated with the process tank area to enable the collection and pump-out of any liquid accumulation.

During the period prior to the issuance of the proposed modification, the new plant will be operated in a testing mode, in which waste water treated in the new treatment plant will be discharged to the existing (old) wastewater treatment plant for treatment at that plant. Once the ability of the new pretreatment works to achieve effluent standards appearing in the state waste discharge permit has been established, the Navy will commence discharge of the treated waste water to the sanitary sewer under the provisions of the proposed permit.

The new Industrial Wastewater Pretreatment Facility will employ processes which are similar to those employed in the existing pretreatment system. In addition, these processes will be followed by new processes to provide greater assurance of long-term compliance, to improve pollution prevention performance.

The processes to be employed in the new pretreatment works, to be located in Building 1109, consist of:

- Batch Physical Chemical Treatment of Metal-bearing Rinse Waters
- Batch Physical/Chemical Treatment of Very Limited Spent Process Solutions
- pH Control of Non-heavy Metal-bearing Rinse Waters
- Removal of Toxic Organic Compounds and Suspended Solids
- Selective Heavy Metal Ion Exchange

The new system will be employed to treat wastewater influent in smaller batches than the existing system. This is expected to enable greater versatility for meeting treatment needs associated with batches of varying characteristics and volumes. The design is characterized by a multiple batch arrangement and provides the opportunity to remove metals with a selective ion exchange system. The design of the new plant is expected to result in higher combined removal efficiencies across three different operating modes, reduction in use of treatment chemicals, reduction in sludge volumes generated, improved compliance reliability, faster processing times, and reduced operating costs.

In addition to the basic process components, the new IWPF will include new rinse water collection tanks and pumps at the Metal Preparation Facility (MPF), a semi-automatic IWPF control system, a process support laboratory, chemical storage locations, and a new transfer pump station for non-MPF tank truck wastes. In addition, there will be a new filtration, dewatering, drying, and metals recovery system.

The facility is designed to process up to 10,000 gallons of wastewater per shift, although the current rate of generation of wastewater is less than 2400 gallons per day. Higher treatment rates may be possible if staffing is extended beyond that needed for single-shift operation. Although no expansion of part production in the metal preparation facility is anticipated at this time, the shipyard must be

ready to accommodate increased flows and loadings on a short-notice basis. Additionally, the shipyard will attempt to process some shipyard wastewaters that are presently shipped off-site for treatment or disposal.	
90HM-1109-002	Industrial Wastewater Pretreatment Facility (IWPF) – Treated Cyanide-Bearing Effluent
A separate sample point has been established for discharge of cyanide-bearing wastes at Building 1109. A separate sample point has been included for cyanide bearing wastes in order to be in compliance with federal categorical pretreatment standards set forth under 40 CFR Part 433, which requires separate sampling for the subset of waste streams from a metal finishing plant, which are being treated for cyanide. USEPA established this regulation because the economic feasibility analysis under which technology-based limits were established for cyanide was undertaken for cyanide as a separate waste stream. As the technology (typically alkaline chlorination) used for cyanide removal is different from that employed for metals removal, USEPA determined that compliance with cyanide standards should be measured directly after the cyanide treatment process. This sampling location also largely prevents achievement of compliance with permit standards by means of dilution with non-cyanide-bearing waste waters.	
910-871-001	Deletion Delayed of Sample Points Associated With Current Industrial Wastewater Pretreatment Facility (IWPF)
Once the treatment system at Building 1109 has been established, and its reliability established with respect to the achieving compliance with limitations, the Puget Sound Naval Shipyard will cease discharge at sample point 910-871-001. As the date upon which discharge ceases from this discharge point is dependent on the successful startup of the new treatment system, the authorization to discharge from the existing pretreatment building is not proposed to be removed under this permit modification. It is anticipated that this sample point will be removed when the permit is reissued following its expiration date in February 2008.	
910-871-002	Deletion Delayed of Sample Points Associated With Current Industrial Wastewater Pretreatment Facility (IWPF)
Once the treatment system at Building 1109 has been established, and its reliability established with respect to achieving compliance with limitations, the Puget Sound Naval Shipyard will cease discharge at sample point 910-871-002. As the date upon which discharge ceases from this discharge point is dependent on the successful startup of the new treatment system, the authorization to discharge from the existing pretreatment building is not proposed to be removed under this permit modification. It is anticipated that this sample point will be removed when the permit is reissued following its expiration date in February 2008.	
NBK-971-001	Emergency Generator Oil/Water Separator Wastewater from Building 971
Building 971 is the designation for the Emergency Generator Facility which provides back-up power to Building 943, the Data Processing Center, should the normal power supply be interrupted. Building 971 contains two large diesel-fired emergency generators. In addition, a 300-gallon aboveground diesel storage tank serves as the day tank, and a 4000-gallon diesel fuel underground storage tank is located outside the building. The day tank is situated within a 30-inch high containment sump with a capacity of 400 gallons. If oil were to overflow the day tank containment system, it would flow to the floor trench and be routed to the oil/water separator. The oil/water separator discharges water to the sanitary sewer, and the oil fraction is routed to the 128-gallon oil containment tank, which is situated within a concrete vault on the floor in the building. Normally, the oil/water separator only discharges about five gallons of water per week to the sanitary sewer system, which is generated from the weekly testing of the eye wash station.	

Authorization to discharge from this sample point has been added to the proposed modified permit. Discharge of waste water from this sample point is expected to occur only rarely, and to be small in volume. Therefore no flow limitation or monitoring requirements are proposed to be included in this permit.	
56-107-027	Steam Plant Pump Flushing Water
Steam plant pump flushing is performed with de-ionized water. The daily average discharge is estimated to be between 200 and 1000 gallons per day. This discharge point discharges to the common sump designated as wastestream 56-107-026. This common sump also receives the discharge from sample points 56-107-008, 56-107-021, 56-107-020, 56-107-022, 56-107-025, 56-107-028, and 56-107-029. The common sump 56-107-026 is already designated as a sample point in the existing permit. Therefore, it is not necessary to modify the permit to include this discharge. However, the change is noted in this fact sheet to document the authorization of this change in processes discharging to this discharge point.	
56-107-028	Bendaloy Tank Heated Water
Wave guides, which are hollow metal tubes, can be bent and still retain their interior shape when they are first filled with Bendaloy, a low melting alloy. Bendaloy is kept at melting pint (flowing) in a trough in a rectangular tank of heated water. The wave guide is first filled with the heated water. Then the Bendaloy is allowed to flow into the wave guide, filling it and displacing the heated water. The maximum daily discharge is estimated to be 100 gallons per day. Waste water is discharged from this sample point approximately two times per month. The displaced water is discharged to the sample common sump (56-107-026) in the shop 56 Pipe Test Stand Area. This common sump also receives the discharge from sample points 56-107-008, 56-107-021, 56-107-020, 56-107-022, 56-107-025, 56-107-27, and 56-107-029. The common sump 56-107-026 is already designated as a sample point in the existing permit. Therefore, it is not necessary to modify the permit to include this discharge. However, the change is noted in this fact sheet to document the authorization of this change in processes discharging to this discharge point.	
56-107-029	Dip Braze Electrode Noncontact Cooling Water
Noncontact cooling water for the dip braze electrode is designated 56-107-029. The discharge from this source is approximately 1440 gallons per day when the system is in use. The displaced water is discharged to the sample common sump (56-107-026) in the shop 56 Pipe Test Stand Area. This common sump also receives the discharge from sample points 56-107-008, 56-107-021, 56-107-020, 56-107-022, 56-107-025, 56-107-027, and 56-107-029. The common sump 56-107-026 is already designated as a sample point in the existing permit. Therefore, it is not necessary to modify the permit to include this discharge. However, the change in discharge characteristics (flow increase) is noted in this fact sheet to document the authorization of this change in processes discharging to this discharge point.	
90-78-001	Training Coverall Washing Wastewater
Coveralls are washed in Shop 90 using two regular clothes washers. The coveralls are used in training exercises. Two ounces of Ecolab laundry detergent bleach are used for each load. No significant pollutants are expected in this wash water, as the coveralls are not used in production processes, and are washed for hygienic purposes only. The estimated maximum flow from this process is 240 gallons per day. The estimated average discharge from this process is 130 gallons per day.	
06-431-009	Canvas Bag Washing Wastewater
New canvas bags used for covering inflatable plugs are washed in a clothes washer in order to remove bleach. General non-ionic detergent is used at a ratio of nine drops per load. There are no significant contaminants other than bleach expected in the wash water. Approximately 20 loads are washed in an	

average month. The maximum flow rate has been estimated using three loads per day as the basis. The maximum discharge is estimated to be 27 gallons per day. The average daily discharge is estimated to be six gallons per day.	
06-452-001	Respirator Face Shield Washwater-Modification of Flow Limitation in Existing Permit
<p>Three clothes washing machines are used at Building 452 with Cal Suds liquid detergent, bleach and 409 Antibacterial Cleanser, and Cascade powder detergent to clean face shields and respirators associated with welding and metal cutting operations. The respirator face shield washing wastestream is described in greater detail in the existing fact sheet.</p> <p>This discharge point is already authorized in the existing permit. However, Puget Sound Naval Shipyard has requested an increase in the authorized flow to 1660 gallons per day maximum, and an increase in the daily average flow to 820 gallons per day. As this flow is relatively minor (similar to domestic wastewater) in nature with respect to its potential for introducing significant pollutants, the maximum flow value for this discharge point was listed in the fact sheet for the existing permit rather than in the permit itself. The maximum flow listed in the existing fact sheet is 300 gallons per day. This change in the flow characteristics is referred to in this fact sheet addendum rather than included in the discharge permit explicitly.</p>	
31-431-Door 1-002	Water Jet Cutting Wastewater (Modification of Flow Limitation in Existing Permit)
<p>The discharge is associated with a water jet cutter used to cut aluminum, rubber, mild steel, cork fibrous glass, HY80, and stainless steel. Settling tanks are used to remove particulate from the older of the two water jets. A filtration system is used to remove particulate matter from the newer of the two water jet cutters. The water jet cutting wastestream is described in greater detail in the existing fact sheet.</p> <p>This discharge point is already authorized in the existing permit. However, Puget Sound Naval Shipyard has requested an increase in the authorized flow to 2000 gallons per day maximum, and an increase in the daily average flow to 260 gallons per day. As this flow is relatively minor (similar to domestic wastewater) in nature with respect to its potential for introducing significant pollutants, the maximum flow value for this discharge point was listed in the fact sheet for the existing permit rather than in the permit itself. The maximum flow listed in the existing fact sheet is 1000 gallons per day. In order to authorize the changed flow from this sample point, the change is discussed in this fact sheet. As no flow limitation is placed in the permit for this sample point in the existing permit, it is not necessary to modify the permit in order to authorize the flow increase.</p>	
820-434-001	Food Preparation Wastewater From Sam Adams Eatery
<p>The food preparation wastewater from this sample point is associated with the Sam Adams Eatery. The Sam Adams Eatery is a pub with a limited food menu. There is one small dishwasher for beer and wine glasses-only. There are three sinks for washing pots and pans used in the preparation of food. The waste water includes typical detergent, bleach, and some cooking grease. The estimated daily maximum discharge to the sanitary sewer is 600 gallons per day. There is one grease trap downstream of the three sinks employed for removal of the cooking grease. The monthly average discharge is 400 gallons per day. Due to the minor nature of this discharge, although the discharge will be listed as being authorized in the proposed modified permit, the flow will only be listed in the fact sheet.</p>	

Lift Station WB3/Lift Station #1 Oil Detection System-Request to Move
<p>The Navy has requested authorization to move the oil detection system from Lift Station WB3 to upstream Lift Station #1.</p> <p>This has already been agreed to by letter. Language has been placed in Section S12 of the proposed modified permit to authorize the change in lift station locations.</p>
First Street Monitoring Vault/Lift Station #9 Oil Detection System-Request to Move
<p>The Navy has requested authorization to move the oil detection system from the First Street Monitoring Vault to the upstream Lift Station #9.</p> <p>This has already been agreed to by letter. Language has been placed in Section S12 of the proposed modified permit to authorize the change in lift station locations.</p>
Request that PSNS be allowed to use Method 200.7, Revision 4.4 May 1994 Environmental Management Council (EMMC) version found in EPA-600/R-94/111 of May 1994 for certain metallic analytes
<p>Method 200.7, an ICAP method, is already allowed in the existing permit for all regulated metals (except mercury). The Department interprets the existing permit as already authorizing utilization of revision 4.4 of Method 200.7. However, language has been added to authorize use of equivalent analytical methods, in order to clarify the acceptability of this revision of Method 200.7</p>